REMARKS

Applicants are filing this divisional application so that the non-elected claims 16-20 from the parent application may now be prosecuted, along with new claims 21 through 24.

The parent application serial number 09/763,217 was allowed on August 5, 2003 and the Issue Fee was paid on November 5, 2003.

Applicant respectfully requests that this divisional application proceed to prosecution on the merits.

Respectfully submitted,

Richard Klar
Reg. No. 31,385

ANDERSON, KILL & OLICK
1251 Avenue of the Americas
New York, New York 10020-1182
(212) 278-1000

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited in the U.S. Postal Service by Express Mail, addressed: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, MAIL STOP PATENT APPLICATIONS (DIV.) with Express Mail Label no. EU483331508US on December 11, 2003.

Signed: _____

Dated: December 11, 2003

:704908-1

Section 4 of Page 9 of Specification:

1.1.1) Start loop for the attenuator element (k)

$$\frac{\sigma a + \sigma a + Z_{(k)}x\sigma a}{PE_{(i;j;k)}\ PP_{(i;j;k)}\ C_{(i;j;k)}} i_{a(i,j,k)} = \qquad x\acute{n}_{(k)}xAv/A_{(k)}$$

$$\mu_{a(i;j;k)} = [\sigma a_{PE(i,j,k)} + \sigma a_{PP(i,j,k)}\ Z_{(k)}x\sigma a_{C(i,j,k)}]xp_{(k)}xAv/A_{(k)}$$

where: $\sigma a\ \underline{\sigma a}_{PE(i,j,k)}$ = effective photoelectric absorption cross-section

$\overline{PE_{(i,j,k)}}$

$\sigma a\ \underline{\sigma a}_{C(i,j,k)}$ = Compton effective absorption cross-section

$\overline{C_{(i,j,k)}}$

Section 1 of Page 10 of Specification:

$\sigma a_{PP(i,j,k)}$ = Effective cross-section for production of pairs $PP_{(i,j,k)}$

Section 2 of Page 10 of Specification:

$$\eta_{e\,(i-j)}^{(NaI)} = PE_{(j)}^{(NaI)} + Z_{(NaI)} \times \sigma a_{(j)}^{(Nai)} \times \frac{Av}{A_{(NaI)}} \times \acute{n}_{(NaI)}$$

Section 3 of Page 10 of Specification:

$$\sigma^{(\text{NaI})}$$

where: ~~PE(j)~~ $\underline{\sigma a}^{(\text{NaI})}_{\underline{PE(j)}}$ = effective photoelectric absorption cross-section for NaI.

$Z_{(\text{NaI})}$ = average atomic number of NaI

~~$\sigma a^{(\text{NaI})}$~~ $\underline{\sigma a}^{(\text{NaI})}_{\underline{C(j)}}$ = Compton effective absorption cross-section for NaI ~~C(j)~~

Section 2 of Page 11 of Specification

$$\sigma\mathrm{dif}_{C(j')} \ (\text{NaI}) \ \times \ z_{(\text{NaI})} \ \times \ \text{Final flux}_{(i,j,k)(i,j',k)} \ \times \ \underline{Av} \ \times \ p_{(\text{NaI})} \ \times \ A_{(\text{NaI})}$$

Section 3 of Page 11 of Specification

~~σdif~~

$$\underline{\sigma dif}_{C(i')} \qquad = \text{effective Compton scattering cross-section}$$

~~C(i')~~

Section 4 of Page 11 of Specification

$$\sum_{n=1}^{N} \cancel{vn} \ \underline{Vn} \ \text{gives scattering spectrum}_{\cancel{(i,j)} \ (i,j')} NaI$$

Section 2 of Page 12 of Specification

σdif

$= \underline{\sigma\text{dif}_{C(i')}} \quad (\text{NaI}) x Z_{(\text{NaI})} \text{ x final flux}_{(i,j,k)} \text{ x } \underline{\text{Av}} \text{ xp}_{(\text{NaI})} \text{ x } X_{(\text{NaI})}$

$$A_{(\text{NaI})}$$

$C_{(i')}$

where: $\sigma\text{dif}_{C(i'')}$ (Nai) = effective Compton front scattering cross-section

$C_{(i'')}$

Section 3 of Page 12 of Specification

$$\sum_{n=1}^{N} \bcancel{vn} \ \underline{Vn} \text{ gives scattering spectrum}_{(i,j\text{''})}\text{NaI}$$

Section 5 of Page 12 of Specification

σdif

$= \quad \underline{\sigma dif_{C(j''')}} \quad (NaI) \times Z_{(NaI)} \times \text{final flux}_{(i,j,k)} \times \underline{Av} \; xp_{(NaI)} \times X_{(NaI)}$
$\phantom{= \quad \sigma dif_{C(j''')} \quad (NaI) \times Z_{(NaI)} \times \text{final flux}_{(i,j,k)} \times} A_{(NaI)}$

$C_{(j''')}$

where: $\sigma dif_{C(j''')}$ = effective Compton background scattering cross-section

$C_{(j''')}$

Section 1 of Page 13 of Specification

$$\sum_{n=1}^{N} \text{vn} \; \underline{Vn} \; \text{gives scattering spectrum}_{(i,j\cdots\cdots)}\text{NaI}$$